

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A crystallized complex comprising acyl carrier protein synthase (ACPS) (SEQ ID NO:2) and acyl carrier protein (ACP) (SEQ ID NO:1), wherein the crystallized complex belongs to space group C222₁.
2. (Currently amended) The crystallized complex of Claim 1, wherein ACPS comprises amino acid residues ~~ARG14, MET18, ARG21, GLN22, ARG24, PHE25, ARG28, ARG45, PHE54, GLU58, ILE68, GLY69, ARG70, SER73 and PHE74,~~ Arg14, Met18, Arg21, Gln22, Arg24, Phe25, Arg28, Arg45, Phe54, Glu58, Ile68, Gly69, Arg70, Ser73 and Phe74, or conservative substitutions thereof, wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:2.
3. (Currently amended) The crystallized complex of Claim 2, wherein ACPS further comprises amino acid residues ~~ASP8, ILE9, THR10, GLU11, LEU12, ILE15, ALA16, SER17, ALA19, GLY20, LYS23, ALA26, GLU27, ILE29, LEU41, SER42, LYS44, GLU48, ALA51, LYS57, SER61, LYS62, THR66, GLY67, GLN71, LEU72, GLN75, ASP76, ILE 77, GLN83, ASN84, LYS93, HIS105, THR106 and ALA107,~~ Asp8, Ile9, Thr10, Glu11, Leu12, Ile15, Ala16, Ser17, Ala19, Gly20, Lys23, Ala26, Glu27, Ile29, Leu41, Ser42, Lys44, Glu48, Ala51, Lys57, Ser61, Lys62, Thr66, Gly67, Gln71, Leu72, Gln75, Asp76, Ile-77, Gln83, Asn84, Lys93, His105, Thr106 and Ala107, or conservative substitutions thereof, wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:2.
4. (Currently amended) The crystallized complex of Claim 1, wherein ACP comprises amino acid residues ~~ARG14, LYS29, ASP35, SER36, LEU37, ASP38, VAL40,~~

~~GLU41, VAL43, MET44, GLU47, ASP48, ILE54, SER55, ASP56, GLU57 and GLU60,~~
Arg14, Lys29, Asp35, Ser36, Leu37, Asp38, Val40, Glu41, Val43, Met44, Glu47, Asp48,
Ile54, Ser55, Asp56, Glu57 and Glu60, or conservative substitutions thereof, wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:1.

5. (Currently amended) The crystallized complex of Claim wherein ACP further comprises amino acid residues ~~ASP13, LEU15, PHE28, GLU30, ASP31, LEU32, GLY33, ALA34, VAL39, LEU42, GLU45, LEU46, GLU49, MET52, GLU53, ASP58, ALA59, and LYS61,~~ Asp13, Leu15, Phe28, Glu30, Asp31, Leu32, Gly33, Ala34, Val39, Leu42, Glu45, Leu46, Glu49, Met52, Glu53, Asp58, Ala59, and Lys61, or conservative substitutions thereof, wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:1.

6. (Previously presented) The crystallized complex of Claim 1, wherein the crystallized complex has unit cell parameters of $a=78.46\text{\AA}$, $b=122.03\text{\AA}$ and $c=136.77\text{\AA}$.

7. (Previously presented) The crystallized complex of Claim 6, wherein the crystallized complex comprises three molecules of ACPS and three molecules of ACP in an asymmetric unit.

8-33. (Canceled)

34. (Previously presented) The crystallized complex of Claim 1, wherein the crystallized complex has the structural coordinates set forth in Figures 3 and 3A-1 to 3A-79, \pm a root mean square deviation from the backbone atoms of the amino acids listed in Figures 3 and 3A-1 to 3A-79 of not more than 1.5\AA .

35. (Currently amended) The crystallized complex of Claim 1, wherein ACPS comprises an active site comprising the structural coordinates according to Figures 3 and 3A-1 to 3A-79 of amino acid residues ~~ARG14, MET18, ARG21, GLN22, ARG24, PHE25, ARG28, PHE54, GLU58, ILE68, GLY69, ARG70, SER73 and PHE74~~ Arg14, Met18, Arg21, Gln22, Arg24, Phe25, Arg28, Phe54, Glu58, Ile68, Gly69, Arg70, SerR73 and Phe74 from a first

monomer of ACPS, and residue ARG45 from a second monomer of ACPS, and in each case the structural coordinates are \pm a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5Å, and the amino acid residues are according to the sequence set forth in SEQ ID NO:2.

36. (Currently amended) The crystallized complex of Claim 35, wherein the active site of ACPS further comprises the structural coordinates according to Figures 3 and 3A-1 to 3A-79 of amino acid residues ~~ASP8, ILE9, THR10, GLU11, LEU12, ILE15, ALA16, SER17, ALA19, GLY20, LYS23, ALA26, GLU27, ILE29, ALA51, LYS57, SER61, LYS62, THR66, GLY67, GLN71, LEU72, GLN75, ASP76, ILE77 and LYS93~~ Asp8, Ile9, Thr10, Glu11, Leu12, Ile15, Ala16, Ser17, Ala19, Gly20, Lys23, Ala26, Glu27, Ile29, Ala51, Lys57, Ser61, Lys62, Thr66, Gly67, Gln71, Leu72, Gln75, Asp76, Ile77 and Lys93 from said first monomer of ACPS and residues ~~LEU41, SER42, LYS44, GLU48, GLN83, ASN84, HIS105, THR106 and ALA107~~ Leu41, Ser42, Lys44, Glu48, Gln83, Asn84, His105, Thr106 and Ala107 from said second monomer of ACPS, and in each case the structural coordinates are \pm a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5Å, and the amino acid residues are according to the sequence set forth in SEQ ID NO:2.

37. (Currently amended) The crystallized complex of Claim 1, wherein ACP comprises an active site comprising the structural coordinates according to Figures 3 and 3A-1 to 3A-79 of amino acid residues ~~ARG14, LYS29, ASP35, SER36, LEU37, ASP38, VAL40, GLU41, VAL43, MET44, GLU47, ASP48, ILE54, SER55, ASP56, GLU57 and GLU60, Arg14, Lys29, Asp35, Ser36, Leu37, Asp38, Val40, Glu41, Val43, Met44, Glu47, Asp48, Ile54, Ser55, Asp56, Glu57 and Glu60,~~ \pm a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5Å, and wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:1.

38. (Currently amended) The crystallized complex of Claim 37, wherein the active site of ACP further comprises the structural coordinates according to Figures 3 and 3A-1 to 3A-79 of amino acid residues ~~ASP13, LEU15, PHE28, GLU30, ASP31, LEU32, GLY33, ALA34, VAL39, LEU42, GLU45, LEU46, GLU49, MET52, GLU53, ASP58, ALA59, and LYS61,~~

Asp13, Leu15, Phe28, Glu30, Asp31, Leu32, Gly33, Ala34, Val39, Leu42, Glu45, Leu46, Glu49, Met52, Glu53, Asp58, Ala59, and Lys61, \pm a root mean square deviation from the backbone atoms of said amino acids of not more than 1.5 Å, and wherein the amino acid residues are according to the sequence set forth in SEQ ID NO:1.

39. (Previously presented) The crystallized complex of Claim 34, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 1.0 Å.

40. (Previously presented) The crystallized complex of Claim 39, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 0.5 Å.

41. (Previously presented) The crystallized complex of Claim 35, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 1.0 Å.

42. (Previously presented) The crystallized complex of Claim 41, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 0.5 Å.

43. (Previously presented) The crystallized complex of Claim 36, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 1.0 Å.

44. (Previously presented) The crystallized complex of Claim 43, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 0.5 Å.

45. (Previously presented) The crystallized complex of Claim 37, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 1.0 Å.

46. (Previously presented) The crystallized complex of Claim 45, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 0.5 Å.

47. (Previously presented) The crystallized complex of Claim 38, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 1.0 Å.

48. (Previously presented) The crystallized complex of Claim 47, wherein the \pm a root mean square deviation from the backbone atoms of said amino acids is not more than 0.5 Å.